



Winston H. Hickox  
Agency Secretary

## Air Resources Board

Alan C. Lloyd, Ph.D.  
Chairman

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Gray Davis  
Governor

April 11, 2003

Dr. Marc Rumminger  
Cleaire Advanced Emission Controls  
14775 Wicks Boulevard  
San Leandro, California 94577-6779

Reference No. RAS-03-13

Dear Dr. Marc Rumminger:

The California Air Resources Board (ARB) has reviewed your request for verification of your Longview™ system. Based on its evaluation of the data provided, ARB hereby verifies that the Cleaire Longview™ system reduces emissions of diesel particulate matter (PM) consistent with a Level 3 device (greater than or equal to 85 percent reductions), and obtains a 25 percent reduction in oxides of nitrogen (NOx). The system was unable to demonstrate compliance with the 20 percent NO<sub>2</sub> limit which takes effect January 1, 2004. The Longview™ system is hereby approved as a Level 3 system, achieving 25 percent NOx, for non-steady state applications.

The aforementioned verification is valid provided the following criteria are met:

The engines are model year 1994 through 1997 Navistar DT466 or Cummins M11 having the engine family numbers listed in Attachment 1.

- The engines do not employ exhaust gas recirculation (EGR) or have oxidation catalysts as part of their original emission control system.

The application must have a duty cycle with a temperature profile greater than 260 degrees Celsius for at least 25 percent of the time.

The engine must be certified in California for on-road applications.

- Certified at a PM emission level of at most 0.1 grams per brake horsepower-hour (g/bhp-hr).

The engine must be four-stroke.

- The engine must be turbocharged.

*The energy challenge facing California is real. Every Californian needs to take immediate action to reduce energy consumption. For a list of simple ways you can reduce demand and cut your energy costs, see our Website: <http://www.arb.ca.gov>.*

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- The engine should be well maintained and not consume lubricating oil at a rate greater than that specified by the engine manufacturer.

Lube oil, or other oil, should not be mixed with the fuel.

- The engine must be operated on fuel that has a sulfur content of no more than 15 parts per million by weight.
- The vehicle is used for predominantly non-steady state applications.

No changes are permitted to the device. The Air Resources Board must be notified in writing of any changes to any part of the Longview™ system. Any changes to the device must be evaluated and approved by the Air Resources Board.

The ARB estimates that the Longview™ system might incur a fuel economy penalty between three and seven percent depending on the application.

As specified in the Diesel Emission Control Strategy Verification Procedure, the ARB assigns each Diesel Emission Control Strategy a family name. The designated family name for the verification as outlined above is: CA/CLE/2003/PM3/N25/ON/LNF of the system-labeling requirement.

Additionally, as stated in the Diesel Emission Control Strategy Verification Procedure, Cleaire is responsible for honoring their warranty (Section 2707) and conducting in-use compliance testing (Section 2709).

Thank you for participating in the AR B's diesel retrofit verification program. Should you have any questions or comments, please contact Ms. Annette Hebert, Branch Chief, Heavy-Duty Diesel In-Use Strategies Branch, at (626) 575-6973.

Sincerely,

A handwritten signature in black ink, appearing to read 'R. Cross', followed by a long horizontal line extending to the right.

Robert H. Cross, Chief  
Mobile Source Control Division

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Attachment 1. M11 and DT466 1994-1997 Engine Families Approved for Verification

Engine Family	Make/Year
RCE661EJDARW	Cummins M11, 1994
RCE661EJDARA	Cummins M11, 1994
RCE661EJDARC	Cummins M11, 1994
SCE661EJDARW	Cummins M11, 1995
SCE661EJDARA	Cummins M11, 1995
SCE661EJDATW	Cummins M11, 1995
SCE661EJDASW	Cummins M11, 1995
SCE661EJDARC	Cummins M11, 1995
TCE661EJDARA	Cummins M11, 1996
TCE661EJDARW	Cummins M11, 1996
TCE661EJDASW	Cummins M11, 1996
TCE661EJDARB	Cummins M11, 1996
TCE661EJDARC	Cummins M11, 1996
TCE661EJDATW	Cummins M11, 1996
VCE661EJDATW	Cummins M11, 1997
VCE661EJDASA	Cummins M11, 1997
VCE661EJDARC	Cummins M11, 1997
VCE661EJDARB	Cummins M11, 1997
RNV466D6D0TW	Navistar, 1994
RNV466D6DARW	Navistar, 1994
RNV466D6DASW	Navistar, 1994
SNV466D6DARA	Navistar, 1995
SNV466D6DASA	Navistar, 1995
SNV466D6DATA	Navistar, 1995
SNV466D8DARB	Navistar, 1995
SNV466D8DASB	Navistar, 1995
SNV466D8DATB	Navistar, 1995
TNV466D6DARB	Navistar, 1996
TNV466D6DATB	Navistar, 1996
TNV466D8DARB	Navistar, 1996
TNV466D8DATB	Navistar, 1996
VNV466D6DARA	Navistar, 1997
VNV466D8DARW	Navistar, 1997
VNV466D8DASA	Navistar, 1997